



PATENT APPLICATION
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: :
Takayoshi OYAMADA, et al. : Group Art Unit: 1752
Appln. No.: 10/025,455 : Examiner: CHEA, THORL
Filed: December 26, 2001 :
For: HEAT-DEVELOPABLE IMAGE RECORDING MATERIAL

DECLARATION UNDER 37 C.F.R. §1.132

Assistant Commissioner for Patents
Alexandria, VA 22313-1450

Sir:

I, Takayoshi Oyamada, do declare and state as follows:

I am a citizen of Japan.

I graduated from Science University of Tokyo and received a Master's Degree in the course of Science in March, 1993.

Since April 1993 I have been employed by Fuji Photo Film Co., Ltd., and, from 1993 to 1998, had been engaged in research and development of a medical analog imaging film, and then, from 1999, have been engaged in research and development of a medical heat-developable image recording material, at the Ashigara Laboratories of said company.

I am co-inventor of the present invention and familiar with the subject matter disclosed by said application.

In order to demonstrate the unexpected superiority of the present invention, the following experimentation was conducted by me or under my supervision.

EXPERIMENTATION

Organic silver salt dispersions D, X, Y and Z were prepared in the same manner as in Example 1 of the present specification except for changing the composition of organic silver salt as set forth in the following Table I-1. The organic silver salt gains contained in the thus-obtained organic silver salt dispersions D, X, Y and Z had a volume weighed average diameter (equivalent-sphere diameter), a coefficient of variation in the volume weighed average diameter, a ratio (length/width ratio) of long side c. to short side b of a grain, and an aspect ratio shown in the following Tables I-1 and I-2.

Heat-developable Photosensitive Materials each containing the thus-obtained organic silver salt dispersions D, X, Y and Z were manufactured and were evaluated in the photographic performance in the same manner as in Example 1 of the present specification. The results are shown in the following Table I-2.

TABLE I-1

Organic Silver Salt Dispersion	Content (mol%)			Reaction Temperature (°C)	Volume Weighed Average diameter (μm)	Coefficient of Variation (%)
	Silver Stearate	Silver Arachidate	Silver Behenate			
D	0	2	98	30	0.4	11
X	0	1	99	30	0.48	11
Y	0	0	100	30	0.48	10
Z	1	0	99	30	0.48	12

TABLE I-2

Organic Silver Salt Dispersion	Length/Width Ratio	Aspect Ratio	Image Preservability (%)	Remarks
D	1	10	0	Invention
X	1	9	0	Invention
Y	1	8	0	Invention
Z	1.6	20	30	Comparison

From the results shown above, it was found that the composition of organic silver salt within the scope of the present invention leads to an achievement of low aspect ratio and excellent image preservability. In addition, from a comparison between the results of the Organic Silver Salts X and Z, it was found that even a smaller amount of stearic acid content leads to a negative influence (the image preservability becomes drastically large, becoming a problematic level for practical application). The fact that the stearic acid content contributes so much to the image preservability of heat-developable photosensitive materials has not been known as yet, and is a surprising new knowledge in the art.

I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under §1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

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Respectively submitted,

Date: September 27, 2006

Takayoshi Oyamada
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